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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues	Rulemaking 13-11-005 (Filed November 14, 2013)

COHEN VENTURES INC DBA. ENERGY SOLUTIONS OPENING COMMENTS ON THE PROPOSED "DECISION PROVIDING GUIDANCE FOR INITIAL ENERGY EFFICIENCY ROLLING PORTFOLIO BUSINESS PLAN FILINGS"

August 8, 2016

Kevin Cornish
Vice President, Business Services
Cohen Ventures Inc. dba Energy Solutions
449 15th Street, Suite 400
Oakland, CA 94612
Tel: (510)482-4420 x212
E-mail: kcornish@energy-solution.com

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I. INTRODUCTION

Pursuant to Rules 14.3 of the California Public Utilities Commission's (Commission or CPUC) Rules of Practice and Procedure, the Cohen Ventures Inc. dba Energy Solutions ("Energy Solutions") submits the following opening comments on the "Decision Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings," July 19, 2016 (PD or Proposed Decision). Founded in 1995, Energy Solutions is an employee-owned consulting firm that provides design and implementation services to the California's utilities for a variety of energy efficiency programs, including incentive programs and the codes and standards (C&S) program.

Within this context, our concerns and comments relate most specifically to the following "Findings of Fact" and "Conclusions of Law" in the PD:

- **Finding of Fact #11**: "Giving utilities energy savings credit against their goals for codes and standards advocacy and also for programmatic activity would represent double counting of savings credit."[1]
- **Conclusion of Law #15**: "Utilities should not be assigned or receive credit towards energy efficiency savings goals for codes and standards advocacy." [2]

We provide recommended changes to both in Appendix A and discuss our rationale below.

II. SUMMARY OF RECOMMENDATIONS

Assembly Bill 802 (Williams, 2015) allows Program Administrators (PAs) to use an

[1] See R.13-11-005 ALJ/JF2/lil, pg. 80.

[2] See R.13-11-005 ALJ/JF2/lil, pg. 82.

"existing conditions" baseline instead of "code base" for *selected* incentive programs. In response, the Commission is concerned about funding activities that lead to double counted savings from incentive programs and C&S advocacy. The Commission's proposal to address this concern is to eliminate the *entire* C&S program savings goals and attribution. PAs can still receive funding to run a C&S program but there will be no clear net incentive for them to pursue maximum C&S savings.

We agree that double counting should be addressed, but the PD's proposal to eliminate all C&S goals and savings attribution could lead to unintended consequences. The proposal will certainly solve the double counting concern but it will also eliminate the accounting and crediting of roughly 80% to 90% of the total C&S savings that don't have any double counting potential, as discussed below. The Commission should continue setting goals for the entire portfolio—including codes and standards—but address the double counting concern through a more targeted and technical approach. Specifically, the Commission should set a policy for subtracting the "to-code" savings component of voluntary program impacts from the attributed C&S program savings where existing baselines are used. This is consistent with the CEC's recent recommendation to the CPUC[3] and a recent recommendation from Navigant and LADWP that was presented to the California Technical Forum (as discussed below).

We recognize that double counting is a non-trivial issue, which may require holistic consideration of related policies. However, at a minimum, we recommend that the Commission sets policies that not only fund the C&S program, but *ensures* its long-term success on behalf of all ratepayers.

III. DISCUSSION

A. The Commission should continue to assign energy efficiency savings goals for codes and standards—and assign advocacy credit towards those goals—except in cases where attributed codes and standards savings overlap with savings from incentive programs that are allowed to count below code

[3] See page 40 in Appendix B of *CEC Analysis of AB 802 Impacts of Codes and Standards on IOU Programs and Demand Forecast* in CPUC (4/21/2016) *Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Baseline Policy and Related Issues.* http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M159/K980/159980778.PDF.

savings.

The PD reflects a concern that the new AB 802 "existing condition" baselines for selected incentive programs will result in energy savings that are double counted for both the incentive programs and the C&S program. To address this concern, the PD proposes to eliminate the *entire* C&S program savings goals and attribution. The PD's Finding of Fact paragraph 11 could be wrongly interpreted that *all* the C&S savings would represent double counted savings. [4] In fact, two recent independent analyses have estimated that the double counted savings potential is relatively low, as represented in Figure 1.

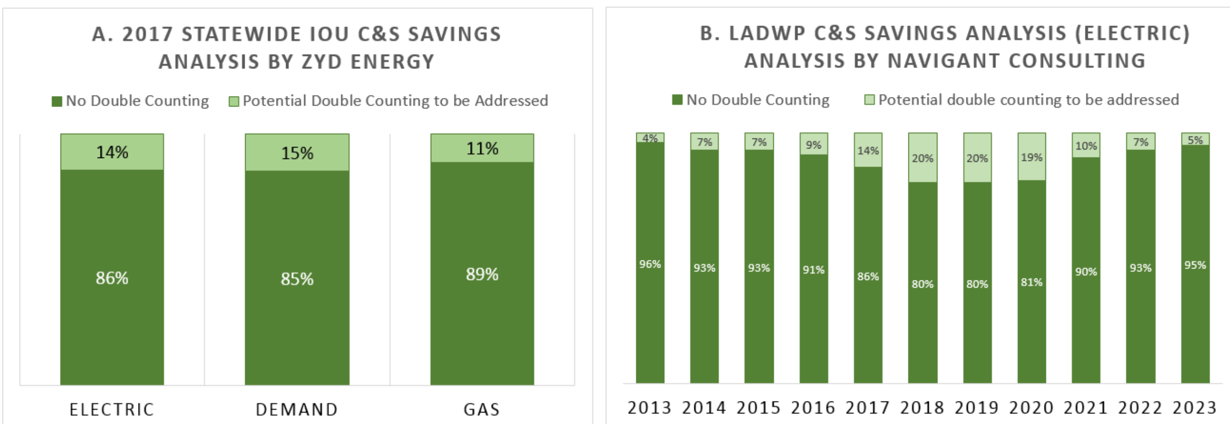

Figure 1. Potential Double Counted C&S Savings in Context[5]

The results shown on the left (chart A) are based on an analysis performed by Yanda Zhang of ZYD Energy (previously with Heschong Mahone Group, Inc. (HMG) and TRC). Mr. Zhang has served as a long-time C&S savings analyst on behalf of the IOUs and has contributed to the CPUC's *California Energy Efficiency Potential and Goals Study*. The results indicate that in 2017, the potential double counted savings is between 11% and 15%, depending on the goal (e.g., electric, demand, or gas).[6] Conversely, between 85% and 89% of C&S savings are not at

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[4] Finding of Fact #11 "Giving utilities energy savings credit against their goals for codes and standards advocacy and also for programmatic activity would represent double counting of savings credit." PD, pg. 80.

[5] The figure was developed by Energy Solutions based on results from separate analyses conducted by ZYD Energy (chart A) and Navigant/LADWP (chart B). Both analysts indicated that the results most likely represent an overestimated upper range of potential double counting.

[6] The results are based on a number of key inputs. For standards that have been evaluated, savings are based on the following CPUC impact evaluation reports: 1) 2006-08 C&S Program evaluation report:

risk of being double counted because they occur in sectors that will retain a code baseline for incentive programs (e.g., all new construction programs and certain programs for existing buildings).[7] In addition, significant C&S savings are achieved for customers where incentive programs have no impacts (e.g., non-participants). The analysis attempts to represent an *upper limit of double counted savings* by estimating higher than likely levels of market penetration for incentive programs that can utilize an existing conditions baseline and claim to-code savings.[8]

A separate analysis by Navigant for LADWP shows comparable results (see chart B in Figure 1). LADWP and Navigant jointly presented their methodology and results at the July 28, 2016 California Technical Forum (Cal TF) meeting.[9] Navigant has been working with LADWP to address potential double counting due to the fact that many LADWP programs already utilize an early retirement strategy. As indicated in their presentation to the Cal TF, "Navigant also

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Codes & Standards (C&S) Programs Impact Evaluation, California Investor Owned Utilities' Codes and Standards Program Evaluation for Program Years 2006-2008, KEMA, Inc., The Cadmus Group, Inc., Itron, Inc., and Nexus Market Research, Inc., February 4, 2010; 2) 2010-12 C&S Program evaluation report: *Statewide Codes and Standards Program Impact Evaluation Report for Program Years 2010-2012*, Cadmus and DNV GL, August 2014, CALMAC ID CPU0070.03; and 3) *Draft California Statewide Codes and Standards Program (Program Years 2013-14) Appendices to Impact Evaluation Report*, Cadmus and DNV GL, May 17, 2016. For standards that have not been evaluated but have been adopted, savings are based on Title 20 and Title 24 CASE study reports and federal appliance standards rulemaking documents. Certain excerpt assumptions were made that have varying degrees of uncertainty but an attempt was made to represent the high estimate for market penetration from new existing conditions incentive programs in order to show the likely upper limit of double counted savings.

[7] See Table 1 from the PD (pg 45). The PD calls for only allowing a few types of programs to count below code savings for existing baselines (e.g., programs with randomized control trial, downstream shell & building system add-on equipment, etc.).

[8] At a high level, that analysis assumes that all lighting-, HVAC-, and envelope-related incentive measures will penetrate 50% of the market and all other measures will penetrate 40% of the market. For the subset of lighting-, HVAC-, and envelope-related incentive measures that use existing conditions as baseline, the analysis assumes 25% market penetration and 20% for all other measures. These assumptions represent a very aggressive prediction of possible incentive program expansion under the proposed baseline policy, and therefore, an upper limit of double counting scenario.

[9] See here for presentation: http://www.caltf.org/s/LADWP-Presentation-to-CalTF-Update-7-21-26.pptx

recognized that the double counting would not eliminate the C&S savings, but only the portion coming from the program participants."[10] Between 2013 and 2016, their results indicate that the double counted savings represented only 4% to 9% of the total C&S savings. Conversely, 91% to 96% of C&S savings did not overlap with incentive programs that could utilize an existing conditions baseline. Over the next 6 years, they estimate that the highest levels of potential double counting are around 20% of C&S electricity savings, but the presenters said this was likely a *worst case scenario*, in part because their methodology for eliminating double counting is overly conservative (e.g., assumes *all* their programs use an Early Retirement rather than Replace on Burnout measure characterization when in fact that only some of their programs use an existing conditions baseline). Further, their analysis only accounts for previously adopted C&S savings and there will likely be new C&S savings being developed from new state and federal advocacy efforts.

In summary, both studies independently showed that double counted savings are likely a relatively small portion of the total C&S savings. Thus, to avoid the unintended consequences of eliminating all the C&S goals and attribution, the Commission should establish a policy to only eliminate advocacy credit for savings associated with programs that are allowed to count below code savings. Even if the potential for double counted savings was larger, we would still strongly recommend setting C&S goals and assigning attribution, as there are many other benefits for doing so, as discussed in the sections below.

B. By establishing C&S goals—and tracking the utilities' attribution towards those goals—the Commission will continue to fully support one of its most successful programs while also ensuring its capacity to structure the most targeted and cost-effective energy efficiency portfolio for its ratepayers.

We fully agree with the Commission's stated goal in the PD to, "ensure that we utilize the limited ratepayer funds under our purview in the most targeted and effective way possible, to induce even more energy efficiency than we have in the past."[11] That is precisely why we think the Commission's final decision should prioritize and emphasize the importance of the C&S program. By establishing C&S goals—and tracking the utilities' attribution towards those goals—the Commission will continue to fully support one of its most successful programs. As

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[10] Slide 12. http://www.caltf.org/s/LADWP-Presentation-to-CalTF-Update-7-21-26.pptx

[11] PD, pg. 23.

shown in Figure 2, the C&S program is on track to account for more than 50% of the portfolio savings while expending less than 3% of the portfolio budget.

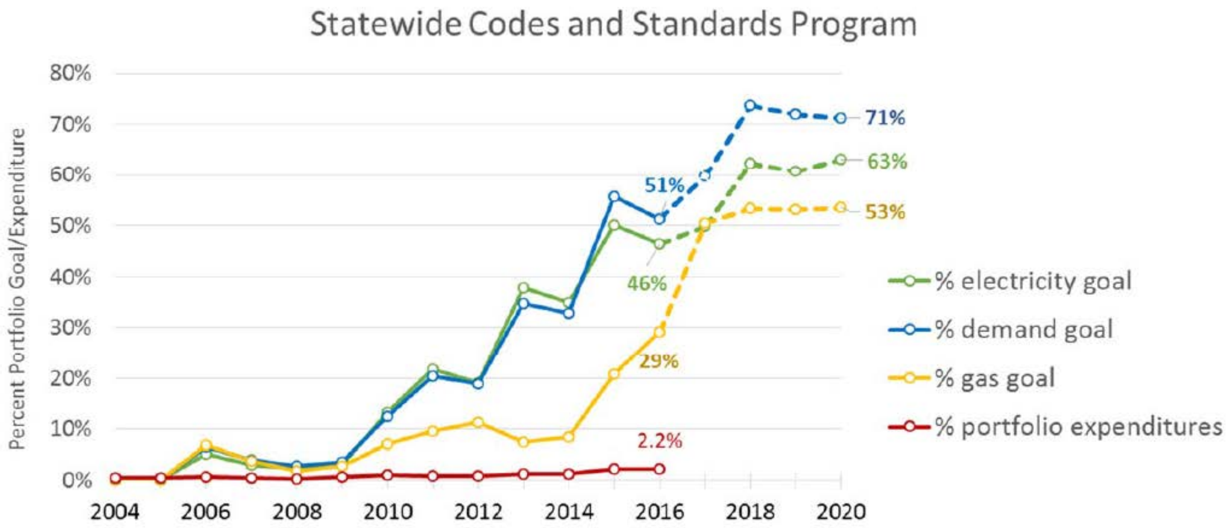

Figure 2: Codes & Standards - Fraction of Portfolio Savings and Costs.[12]

Without energy savings targets for C&S advocacy, the PD could inadvertently send a signal to do less C&S advocacy. By only having goals for incentive programs, the portfolio activities will become correspondingly less integrated and less optimized for least-cost reduction in energy consumption. Even modest reductions in the efficacy of the C&S program caused from this destabilization would create significant EE Portfolio savings reductions that voluntary programs must address at many times the cost of C&S impacts. The Commission previously articulated these concerns in Decision D.05-09-043 when it originally recognized the value in setting up an integrated portfolio:

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[12] Slide 3. *Codes and Standards Program: Statewide Presentation*. Stage 2 Meeting EE Coordinating Council. May 4, 2016. http://media.wix.com/ugd/0c9650_7b6b1a4581114c73b658ca50b37ba625.pdf. C&S savings percentage is based on adopted standards (thru March 2016) for which Statewide IOU team conducted advocacy efforts. Savings are either from CPUC Impact Evaluations (for standards that became effective in 2006 thru 2012) or IOU estimates (for standards that become effective in 2013 and beyond). Per CPUC policy, C&S savings are net and portfolio goals are based on gross incentive programs savings and net C&S savings. The goals used to calculate the percentages are based on Decision D09-09-47 (2010-12), Decision 12-11-015 (2013-14), Rulemaking 13-11-005 (2015), and Decision 15-10-028 (2016 and beyond).

> *"We believe that the concept of estimating the potential for the combination of all program efforts (including codes and standards advocacy work) and establishing energy efficiency portfolio goals on that basis has considerable appeal. Doing so could better enable us to assess the economic potential of improved codes and standards alongside direct installation and other resource programs, as well as their associated savings achievements. It would also remove conflicting signals to the utilities that arise if the savings potential of energy efficiency is ratcheted downwards to reflect the higher codes and standards that their advocacy work in previous years has produced."*[13]

Further, in the same decision, the CPUC anticipated the significant cost-effectiveness for the C&S program that we have subsequently seen occur (as shown in Figure 2 above):

> "*Using ratepayer dollars to work towards adoption of higher appliance and building standards may be one of the most cost-effective ways to tap the savings potential for energy efficiency and procure least-cost energy resources on behalf of all ratepayers*"[14]

Subsequent CPUC decisions continued to emphasize the importance the C&S program within the portfolio, including D.12-05-015 that stated the following:

> ***"****The Staff Proposal calls for 'a redesign of the statewide codes and standards program,' placing it in 'a central strategic position within the IOU energy efficiency portfolio.' The proposal addresses a perceived gap in current IOU codes and standards programs, namely, the absence of an integrated process for coordinating codes and standards activities throughout all of the IOUs' programs."*[15]

> *"After considering all the factors impacting the codes and standards program, we are persuaded that the Staff Proposal to create an integrated dynamic approach should be developed. An integrated approach to the codes and standards program addresses the critical need for targeted and collaborative efforts with technology development leading to future codes and standards adoption."*[16]

Given the previous Commission directives to develop integrated portfolios, and the work being done in the current Business Planning process to deliver on this vision,[17] we

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[13] CPUC D.05-09-043, pg. 127.

[14] CPUC D.05-09-043, pg. 177.

[15] CPUC D.12-05-015, pg. 246.

[16] CPUC D.12-05-015, pg. 249.

[17] For example, see the Statewide C&S team strategy presented in the May 4, 2016, California Energy Efficiency Coordinating Committee (CAEECC) C&S Stage 2 Subcommittee meeting as well as PA comments in the Commercial Sector Stage 2 meeting presentations show increased emphasis on "code readiness" strategies and the important of long-term integrated planning to achieve directed market

believe it is vital for the Commission to set new policies that align with the vision that it has established as precedent.

We also recommend that the Commission continue to consider and track the cost-effectiveness of the entire portfolio, including the C&S program. While we acknowledge the value in understanding the cost-effectiveness for individual programs and for the portfolio without C&S, ignoring or discounting the C&S impacts (or setting policies that could lead to a diminished understanding of the full portfolio cost-effectiveness) would be imprudent.

C. By establishing C&S goals—and tracking the utilities' attribution towards those goals—the Commission will increase its ability to measure and direct the C&S activities that are critical for meeting statewide goals, including doubling efficiency by 2030 (SB 350), reducing 2030 GHGs to 40% below 1990 levels, and achieving ZNE buildings.

Setting clear savings expectations for the C&S program will be critical for achieving the overall SB 350 goal, which is based on savings from both incentive programs and the C&S program. The SB 350 goal is based on doubling the AAEE (Additional Achievable Energy Efficiency) savings forecast, which includes a significant amount of *new* C&S savings. Based on modeling performed by California IOU staff and consultants for an upcoming ACEEE Summer Study paper,[18] it is estimated that C&S could achieve at least 68% of the SB 350 efficiency target. The integrated consideration of incentive and C&S programs will enable close coordination on resource allocation and implementation planning to ensure the SB 350 goal to be achieved with appropriate ratepayer funding demand. In addition to the 2030 statewide goals for EE and GHGs, the C&S program is playing a critical role in supporting the CEC to develop ZNE building codes consistent with the CPUC's adopted *California Long-Term Energy Efficiency Strategic Plan*. With explicit and ambitious program goals from the CPUC, the C&S program

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transformation See the following presentations and documents from the CAEECC Business Planning process: (http://www.caeecc.org/#!blank-34/dy5v9), (http://media.wix.com/ugd/0c9650_d0a9606c8e694bfd90d9795777ee76dd.pdf), (http://www.caeecc.org/#!blank-25/tul9c).

[18] Eilert et al. Codes and Standards Climate Strategy. Accepted for publication. 2016 ACEEE Summery Study on Energy Efficiency in Buildings.

can be a potent, cost-effective contributor towards California's landmark energy efficiency and GHG goals.

D. By establishing C&S goals—and tracking the utilities' attribution towards those goals—the Commission will continue to support the long-term market transformations that the Commission wants and that the C&S program supports.

The PD states the following: *"if we are to meet the goals of SB 350 not only to double energy efficiency savings, but also to address the 2030 greenhouse gas reduction goals, we must continue to emphasize long-term sustainability of our programs and measures."*[19] We completely support this goal but are concerned that de-emphasizing the C&S program by eliminating the associated goals and savings could jeopardize this vision. Since 1998, the C&S Program has provided technical support for more than 114 building codes and 54 appliance standards in the state, as well as over 105 federal appliance standards or test procedures. The associated impacts have resulted in long-term, sustainable energy savings for virtually every ratepayer in the state of California. To take just a few examples, in the past decade, most Californians have likely purchased a light bulb, a television, and/or a product with an external power supply or battery charger. All of these Californians have benefited from standards that have made these products more efficient; and those standards were developed and strongly attributed to the utility C&S program.

E. By establishing C&S goals—and tracking the utilities' attribution towards those goals—the Commission will support better alignment and transparency between the Commission's goal-setting work and the CEC's demand forecasting and utility procurement activities.

We agree with the Commission's desire to increase alignment and transparency through existing mechanisms (e.g., Joint Agency Steering Committee (JASC) and the Demand Analysis Working Group (DAWG)) and through new processes. However, removing the C&S program goals and attribution could be counter-productive to this vision. The utilities and the Commission have a robust and rigorous methodology for tracking and attributing savings from the C&S program (e.g., this includes data input and outputs from Codes and Standards Enhancement

[19] Pg. 20.

(CASE) reports, Code Change Theory Reports (CCTR), CPUC C&S Impact Evaluations, etc.). While additional work is certainly needed to coordinate and align with the CEC, CAISO, and CARB—as directed by the JASC—the current C&S savings methodology developed by the CPUC will be important and valuable for this process.

With respect to energy procurement activities and implications, the savings overlap between voluntary programs and C&S has to be understood, otherwise not enough capacity will be scheduled for future load growth. Conversely, not keeping full track of C&S savings that are *in addition* to the C&S savings that overlap with EE programs savings could lead toward purchasing excess capacity. This excess investment—which is significantly more expensive than the capacity cost deferred with C&S savings—is certainly not in the public interest and would be at odds with California's loading order.

IV. CONCLUSION

Energy Solutions appreciates the opportunity to provide these comments in response to the Proposed Decision. We appreciate the Commission taking our comments and recommendations into consideration as it works to structure the most cost-effective energy efficiency portfolio to help meet our state's energy and climate goals.

Dated: August 8, 2016

Respectfully submitted,

Kevin Cornish

/s/ Kevin Cornish

Kevin Cornish
Vice President, Business Services
Cohen Ventures Inc. dba Energy Solutions
449 15th Street, Suite 400
Oakland, CA 94612
Tel: (510)482-4420 x212
E-mail: kcornish@energy-solution.com

APPENDIX A. RECOMMENDED CHANGES TO THE FINDINGS OF FACT AND CONCLUSIONS OF LAW

(Deletions in ~~strikethrough~~, additions underlined)

Proposed Changes to Findings of Fact:

11. Giving utilities energy savings credit against their goals for codes and standards advocacy and also for the same associated savings from programmatic activity that is allowed to count below code savings would represent double counting of savings credit.

Proposed Changes to Conclusions of Law:

15. Utilities should ~~not~~ be assigned ~~or~~ and receive credit towards energy efficiency savings goals for codes and standards advocacy except in cases where attributed codes and standards savings overlap with savings from incentive programs that are allowed to count below code savings.